roads. But so long as the turnpike roads, upon which tolls are paid, are not made of sufficient width, the toll-payers justly complain, and the example is a bad one for other roads kept in order by the proprietors at their own charge. Good winter roads are so convenient and comfortable, that every means should be adopted that would insure them to us. We regret to say, that the narrow roads is one cause that we have not so many double sleighs upon the road this year, and they would be the most certain means of making good winter roads without any expense.

*Cote St. Paul*, 15th *January*, 1843.

## UNBURNT BRICK HOUSES.

Houses properly constructed of this material are warmer, more durable and also cheaper than frame, and are destined to take the place of the log shanty, as well as the more expensive wooden walls. They are admirably adapted to the peculiar circumstances of Canadian settlers, as they neither require much skill nor expenditure to erect them. Those who profess to be the best acquainted with the subject, are of opinion, that they are best calculated for Cottages or buildings that are not designed to be carried higher than 15 feet. The great difficulty in high walls built with mud-brick is that the rough casing or outer coat of plaster is subject to fall off, the real cause of which has been heretofore overlooked. This falling off proceeds from the fact that the ingredients composing the plaster are not properly compounded and tempered so as to cause the surface to be impervious to water. By examining plastered walls minutely, there may be seen small apertures, which act as so many receptacles to receive the water. The difference between burnt and unburnt brick, is simply this, the one becomes soluted the moment it comes in contact with water, and the other admits the moisture, without becoming dissolved. Clay or unburnt brick houses are much more wholesome for either man or beast, than either burnt brick or stone, in consequence of their having less affinity to moisture. Burnt brick are extremely porous, and each brick freshly taken from the kiln, will admit one third of its weight of water. From these facts, then it would appear that the only difficulty in the way, in bringing mud or unburnt brick houses into general use, is the liability of the plaster to fall off. We feel satisfied that two very successful plans might be practiced, the one to build a varanda around the whole building, and the other by compounding the ingredients, which compose the plaster so as to form a close solid and impenetrable surface. A plaster may be formed with an equal proportion of pure clay, sand, ashes and lime, thoroughly incorporated together, and mixed with a portion of fresh bullocks blood, equal to one half of each of the above ingredients. The blood should be well stirred to prevent it from coagulating.

To those who have already built and are apprehensive that the plastering exposed to the action of the changes of weather, will not prove durable, we advise them to make a composition of the following materials, and apply it while hot on the outer surface with a common painter's brush: To five gallons of water, add five quarts of Liverpool or Rock salt, boil and skim, then take six quarts of unslacked lime, slack and sift it, put it into the hot brine; also, 1 lb. of allum, ½ lb. of copperas, ¾ lb. pearlash, the last to be added gradually, then add four quarts of fine pure sand, mix the whole together and apply two coats as above. Any colouring matter may be added to give the shade required. If this process be properly performed it will make the wall have the appearance of slate and be remarkably durable.

The mode of making the brick is very simple. The first step is to make a clay pit in an oval shape, and fill it with pure clay, blue is the best if procurable, as soon as this is done, water should be copiously applied, and after the clay being saturated with water 24 hours, a yoke of oxen may tread or temper it, and during this operation short straw must be applied at the rate of four common bundles to a hundred bricks. The bricks are moulded quite convenient to the pit, by simply placing the mould on the ground which should have an even surface, and filling it with the tempered mortar with a common three pronged fork—by drawing a straight edge board across the upper surface of the mould, and raising the mould the brick is formed, which must remain on the spot until it becomes sufficiently dry to turn on its edge. When they are dry enough to move without spoiling the shape, they may be stacked up to season, and should be secured from the wet by broad boards.

In constructing this style of houses the two following particulars must be invariably observed, viz:—The erection of a substantial stone wall, at least two feet above the level of the ground, and a hip or cottage roof projecting over each side, of the wall not less than thirty inches.—Another very important feature is to have a quantity of bond timber interspersed through the wall consisting of one inch and a half, or two inch planks. To give our readers some idea of the costs of such walls, when they are given out by contract, we will, illustrate the subject by mentioning the following facts. Mr. William Benson of the village of Yorkville, one mile north of this city, has built a very great number of these buildings, and has invariably taken them by contract at the rate of £1 per hundred brick, including making and laying, the bricks being 6 inches thick, 12 inches wide, and 18 inches long. He built the last summer a number of houses of various sizes, one of which, was for a farmer, by the name of Robert Maharfey of the township of York, the dimentions being 28 feet wide by 38 feet long and 14 feet high, exclusive of two feet of stone wall for the foundation. The number of bricks in the wall, windows excepted, were 2248, which at one pound per hundred brick, would equal £22 10 0. There was 11 toice of stone required for the foundation, which cost 6 shillings per toice for laying into wall, about one half the quantity of mortar is used for plastering on mud-brick that is required on lathing, and the plasterers will do the work for thirty per cent less than on the latter. The chimnies and inside walls are very frequently made of the same material, but the bricks are much smaller, any size may be used, but the most convenient and expeditious size for building is 6 inches thick, 6 inches wide and from 12 to 18 inches long—the bottom and top of the chimney have of course to be built with burnt brick or stone. The only cement used for laying up the brick, is an equal proportion of pure clay and sand mixed to the consistence of mortar.

If further information be required by any who may intend to build, by making the enquires through our Journal, we would be most happy in answering such enquiries.—*Pub.*

## WEIGHT OF OXEN.

The parts of an ox to which the term *offal* is usually applied are the head and feet, the tallow, the hide and horns, and the entrails.

The fat which grows internally is mostly termed tallow, and is generally considered to be of the same value, weight for weight, as the flesh of the fore-quarters; and so likewise is the hide. These and the other parts, termed offal, are commonly regarded as forming about one-fifth of the value of the animal. When beef is said to be sold at a certain price *sinking the offal*, the meaning merely is, that the whole price of the animal is reckoned upon the carcase, alone; hence, when beef is sold at a certain price sinking the offals, that price is more than if it were sold without including in it the price of the offals.

The portion of the ox which is used for food, exclusive of the offals, is usually termed the quarters, because the animal on being cut up, is divided into four parts or quarters. The most esteemed parts for food are the hind-quarters. These weigh something less than the fore-quarters: though the more perfect the form of the animal is, the more nearly do the fore and hind quarters approach in weight.

Practice enables persons to judge of the weight of animals by the eye alone; but it is convenient to be able to ascertain the weight by measurement. This may be done with considerable correctness in the following manner:—when the animal is standing in a natural position, measure his length in feet from the foremost upper corner of the shoulder-blade in a straight line to the hindmost part of the rump, then measure the girth or circumference immediately behind the fore-legs; multiply the square of the girth by the length, and this product by 238, which will give the weight of the quarters in stones of 14lbs. each. This rule has been arrived at by regarding the body of the animal as a cylinder, and determining, by experiment, what proportion on an average, the actual weight of the quarters of animals bears to the cylinder,

Another method of ascertaining the weight of fat cattle is, by weighing when alive, one half of the live weight may be considered an equal to that of the four quarters; but the case of fully fatted animals, a more correct result would be arrived at by multiplying the gross weight by 605. This rule has been arrived at, by determining from the average of cases, what proportion the dead weight of the four quarters is found to bear to the living weight of the animal.—*Low's Agriculture.*

In case of weighing animals while living, they should be weighed while they are regularly fed. The live weight of an animal which at regular feed, must be very different from what it would be if weighed after a long journey, and irregular feeding. These circumstances should be taken into consideration in weighing cattle while alive, as must necessary have a very material influence in determining the exact weight of beef, tallow and hide, which a live animal will produce, when slaughtered. We once weighed a well fatted cow—live weight near 1300 punds—dead weight near 900—inluding four quarters, tallow, hide, head, heart and feet. This cow was drove about four miles from her stall provision to weighing, and immediately weighed on arriving at the scale.